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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,165	04/01/2004	Tae Min Kim	K-0630	7365

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EXAMINER	
BERTHEAUD, PETER JOHN	
ART UNIT	PAPER NUMBER
3746	
MAIL DATE	DELIVERY MODE
05/21/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/814,165	KIM ET AL.	
	Examiner	Art Unit	
	PETER J. BERTHEAUD	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 March 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-18 and 21-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-18 and 21-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 March 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/5/2008 has been entered. It is noted that claim 1 has been amended, claims 3, 19, and 20 have been cancelled, and claims 24-25 are new.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 8, 9, 14, 16-18, and 22-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Collings 6,176,688.

Collings discloses a hermetic compressor comprising a hermetic container 22 having an enclosed space formed therein; a motor part 34 provided in the hermetic container; a compression part 55 coupled to the motor part 34, wherein the compression part compresses low temperature, low pressure refrigerant into high temperature, high pressure refrigerant; a discharge muffler 70 positioned adjacent to the

compression part (see Fig. 3A), wherein the discharge muffler attenuates noise generated by the refrigerant as it is compressed; a discharge pipe 134 that extends through a side of the hermetic container (see col. 6, line 43-47); a loop pipe 130,132 that extends from the discharge muffler 102 to the discharge pipe 134, wherein refrigerant discharged from the discharge muffler flows through the loop pipe 130,132 and is discharged from the hermetic container through the discharge pipe 134, wherein the loop pipe 130,132 includes a plurality, of bent portions (see Fig. 2); and at least one transit tube (see top portion of 134 that surrounds 132) coupled to an end of the loop pipe 130,132, wherein the at least one transit tube surrounds an outer circumferential surface of the end of the loop pipe 130,132 (see configuration in Fig. 2); wherein transit tube is coupled to a second end of the loop pipe 130,132, at a coupling between the second end of the loop pipe and the discharge pipe 134; wherein the hermetic container includes: a lower container 26 having a downward hollow; and an upper container 24 positioned on an upper rim of the lower container so as to form the enclosed space therebetween; wherein the lower container 26 has a hole extending through one side to receive the discharge pipe 134 fitted therethrough (see 26 in Fig. 2); wherein the compression part includes: a cylinder 52 having a space formed therein for compressing refrigerant; a piston 50 that reciprocates along an inner circumferential surface of the space formed in the cylinder; a valve assembly 61 that controls suction of refrigerant into and discharge of refrigerant from the space formed in the cylinder 52; and a connecting rod 48 that converts a rotation force generated by the motor part 34 into a reciprocating movement transmitted to the piston 50; wherein the valve assembly

includes a head cover 54 that isolates refrigerant being drawn into the cylinder from refrigerant being discharged from the cylinder 52. Collings further comprising a pseudo-discharge muffler 70 positioned at a side of the compression part 55 which is opposite the side at which the discharge muffler 102 is positioned; wherein the pseudo-discharge muffler acts as a balance weight for the discharge muffler. Collings further comprising supporting parts (see bottom of 26 in Fig. 1) provided on opposite sides of a bottom surface portion of the lower container; wherein the at least one transit tube (top portion of 134) forms a seal at a coupling between an end of the loop pipe (132) coupled to the discharge pipe 134, so as to prevent heat generated during operation of the compressor from being emitted therethrough (see col. 6, line 43-47); wherein the plurality of bent portions of the loop pipe 130,132 cause the loop pipe and refrigerant flowing therethrough to change direction a corresponding number of times; wherein the loop pipe 130,132 includes a plurality of straight portions extending between the plurality of bent portions (see configuration of 130 and 132 in Fig. 2).

Furthermore, while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function, because apparatus claims cover what a device is, not what a device does (Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990)). Thus, if a prior art structure is capable of performing the intended use as recited in the preamble, or elsewhere in a claim, then it meets the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2, 7, 10, 11, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collings 6,176,688 in view of Roelsgaard 3,187,996.

Collings discloses the invention substantially as claimed. Furthermore, Collings teaches that the rotation shaft 42 includes an eccentric part 46 provided at an end thereof, wherein the eccentric part 46 is eccentric from a rotation axis of the rotation shaft 42; and wherein a plurality of springs (see Fig. 2 in Collings) are provided under the stator, wherein the plurality of springs absorb vibration generated during operation of the compressor. However, Collings does not teach the following claimed limitations taught by Roelsgaard.

Roelsgaard teaches a hermetic compressor having a pipe 21 connecting the compressor and the casing (fig. 2). The pipe 21 is connected to transit tubes 14a. The pipe 21 is made of a synthetic plastic having a thermal conductivity lower than metal in order to reduce heat transfer from the pipe 21 into the interior of the casing 2. In view of this teaching, it would have been obvious to make the pipe 130,132 of Collings of a synthetic plastic or resin having a low thermal conductivity. Regarding claim 10, Roelsgaard also teaches locating the motor in the lower portion of the container 2. In view of this teaching, it would have been obvious" to invert the motor/compressor of

Collings so that the motor is located in the lower portion of the container and the cylinder block is located over the motor.

6. Claims 4, 5 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collings 6,176,688 in view of Na US 2004/0013550 (US Patent No. 6,835,050).

Collings discloses the invention as discussed above: regarding claim 5, Official Notice is taken of the fact that refrigerant tubes are, conventionally made of metal. However, Collings does not teach the following claimed limitations taught by Na.

Na teaches a hermetic compressor assembly comprising a discharge muffler 230, a transit tube 260, and a loop pipe 270; wherein the at least one transit tube 260 comprises a first transit tube coupled to a first end of the loop pipe 270, at a coupling between the first end of the loop pipe 270 and the discharge muffler 230; and wherein the at least one transit tube 260 reinforces a coupling between an end of the loop pipe 270 coupled to the discharge muffler 230 so as to prevent breakage of the loop pipe due to vibration generated during operation of the compressor.

Therefore, it would have been obvious at the time of invention to have modified the compressor assembly of Collings by implementing a transit tube between an end of the loop pipe coupled to the discharge muffler, as taught by Na, in order to allow for a quick and sturdy coupling of the muffler to the loop pipe (Na, col. 3, lines 53-58).

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collings 6,176,688 in view of Roelsgaard 3,187,996 and in further view of Yoshimura 6,152,703.

Collings in view of Roelsgaard discloses the invention as discussed above. However, Collings in view of Roelsgaard does not teach the following claimed limitations taught by Yoshimura.

Yoshimura teaches a suction pipe for an hermetic compressor that is made of Teflon. Teflon is a material having low heat conductivity (see col. 44, line 58). In view of this teaching, it would have been obvious to make the loop pipe of Collings and Roelsgaard of Teflon.

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collings 6,176,688 in view of Roelsgaard 3,187,996 and in further view of Andrione 4,478,559.

Collings in view of Roelsgaard discloses the invention as discussed above. However, Collings in view of Roelsgaard does not teach the following claimed limitations taught by Andrione.

Andrione teaches a hermetic compressor having a balance weight 42 on the rotation shaft. In view of this teaching, it would have been obvious at the time of invention to provide a balance weight on the rotation shaft of Collins in view of Roelsgaard in order to reduce vibration.

Response to Arguments

9. Applicant's arguments with respect to claims 1, 2, 4-18, and 21-25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER J. BERTHEAUD whose telephone number is (571)272-3476. The examiner can normally be reached on M-F 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art Unit 3746

PJB
/Peter J Bertheaud/
Examiner, Art Unit 3746